

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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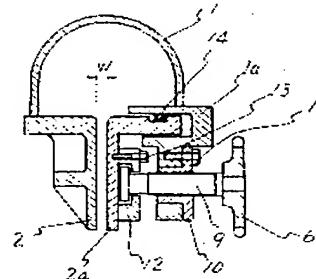
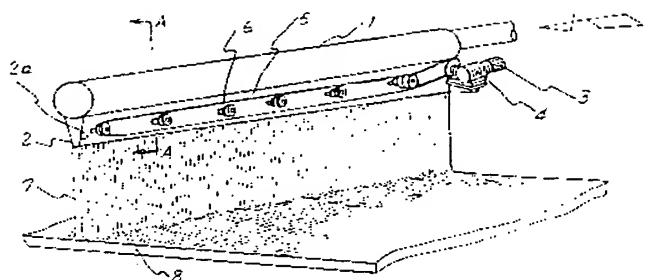
APPLICATION DATE : 18-12-80  
APPLICATION NUMBER : 55178062

APPLICANT : NIPPON STEEL CORP;

INVENTOR : NISHIKAWA TETSUHEI;

INT.CL. : B21B 45/02 C21D 1/00

TITLE : SLIT TYPE LAMINAR FLOW NOZZLE



ABSTRACT : PURPOSE: To prevent overcooling of the end part of a metallic plate by making the distance of guide vanes of a nozzle that determines the slit width perpendicular to the direction of advance of a hot metallic plate to be cooled gradually narrower toward the end.

CONSTITUTION: Cooling water supplied to a header 1 flows down as a laminar flow to a steel plate 8 at a flow density controlled by pressure in the header and slit type nozzle interval, that is the slit width, formed by guide vanes 2, 2a. The slit width is adjusted by driving a moving side vane 2 against an opposite fixed side vane 2 through a motor 3, a reduction gear 4, a chain 5 and a sprocket wheel 6. The lead of a screw 9 connected to a wheel 6 and a nut 10 fitted to it is made small in the central part and greater toward the end. Accordingly, the slit width W is determined by advance and retreat of the vane 2 divided into plural number in the direction of length of the head 1 by rotation of the screw 9, and the rate of reduction is greater in the end part compared with the central part.

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